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Intestinal Tuberculosis.—Of a group of 163 patients, mostly Indians, all of whom but 2 had pulmonary tuberculosis and in whom intestinal tuberculosis had been suspected, 64 (52.8 per cent) showed definite radiological signs of secondary intestinal tuberculosis. The X-ray diagnosis was based upon demonstration of typical filling defects in the ileum, caecum and ascending colon especially. Rapid passage of the barium through the colon was found in X-ray negative cases more frequently than is reported for European patients. Of 103 unselected cases with pulmonary tuberculosis, 32, or 31.1 per cent, had intestinal tuberculosis. The degree of pulmonary involvement, the duration of the disease and the number of bacilli excreted from the lungs seem to have a bearing upon the development of the intestinal complications. A good agreement was found between the radiological diagnosis and clinical symptoms characteristic of intestinal tuberculosis. The most significant symptom was weight loss. The prognosis, though certainly more unfavorable for cases with intestinal tuberculosis, should not be regarded too pessimistically, as many cases undoubtedly fare well despite their abdominal complication.—*Intestinal Tuberculosis: Its Diagnosis and Significance in the Treatment of Pulmonary Tuberculosis, J. Frimodt-Möller, Indian M. Gaz., October, 1943, 78: 505.*—(*G. C. Leiner*)

Genito-urinary Tuberculosis.—Ranke's classification of tuberculosis in three stages does not necessarily hold as there may not be forward progression. Thus stage one may pass into stage three by haematogenous dissemination and isolated organ-tuberculosis may again become stage two as a recurrence or single episode. Having this in mind, it is well to remember that tuberculous dissemination may be a possibility and any attempt to diagnose extrapulmonary foci should be as keen as in any pulmonary study. Therefore, any urinary findings exceeding the upper limits of normal of twelve leucocytes per high power field in women and six per high power field in men in 15 cc. of centrifuged urine should automatically call for a twenty-four hour specimen to be examined for tubercle bacilli by concentrate and culture. Such an examination should be repeated monthly or biweekly until sufficient information for the urologist is obtained. Such a routine has been employed at the Municipal Sanatorium of New York, and, since the introduction of this routine, a high per cent of excretory tuberculosis has been found. In an eighteen month period, 393 examinations were made in 214 cases because the routine examination deviated from normal. Tubercle bacilli were found in 29 instances, representing 14 individuals or 7 per cent of the total studied. Ages ranged from seventeen to forty-nine. Clinically these cases fell into three groups: (*1*) clinical genito-urinary tuberculosis with frank clinical signs, (*2*) subclinical disease in which symptoms are vague or absent, and (*3*) tuberculous bacilluria. The subclinical group differs from the clinical only in degree and extent, but, as in pulmonary disease, early diagnosis is desirable. In those having bacilluria, the findings were not constant and

clinical investigation revealed no causative lesions. However, most workers concede that, if no disease is found in the genital tract, the finding of tubercle bacilli in the urine is indicative of renal tuberculosis. So one must assume that a focus or several foci were established during the second phases of the patient's tuberculous history, the foci healing as similar foci do in the lung so that the bacilluria is transitory. These patients should be constantly checked to determine whether at any time they have progressed to the subclinical form of infection requiring surgical intervention.—*Preclinical Genito-urinary Tuberculosis, G. E. Kenny, S. E. Cohen & L. Bauer, Am. J. M. Sc., August, 1943, 206: 204.*—(*G. F. Mitchell*)

Rectal Tuberculosis in Monkeys.—Evidence is presented to show that, through the use of contaminated rectal thermometers, the rectum may be a portal of entry for the introduction of tubercle bacilli in the monkey. At autopsy most of the tuberculous lesions in these animals were of a distinct and unusual type, involving the rectum and pelvis. An outstanding feature was the presence of multiple pelvic abscesses situated near the midline. The primary lesion appeared to have involved the rectum and to have spread to the abdominal cavity, extending in some instances to the mesenteric nodes, liver and spleen. A rare animal with far advanced abdominal disease would have minimal pulmonary lesions but during this "epidemic" it was unusual to find tuberculosis above the diaphragm. Cultures, guinea pig and rabbit inoculations proved these organisms to be tubercle bacilli of the human type.—*Rectal Tuberculosis in Monkeys from the Use of Contaminated Thermometers, J. T. Riordan, J. Infect. Dis., September–October, 1943, 73: 93.*—(*F. G. Petrik*)

Sarcoidosis.—When originally described the disease was thought to be purely a skin disease. Later on it was recognized as affecting the lymphatic systems, and still later its position as a generalized granulomatous disease affecting all organs was established. The aetiology has not been agreed upon, and the most prominent theories mention its connection with the tubercle bacillus, or with a virus. No matter what the aetiology may be, the disease presents a characteristic and uniform pathological picture which is easily recognized. The essential feature is a nodule, about the size of a miliary tubercle, which consists of epithelioid cells with scattered lymphocytes. Giant cells occur occasionally but are uncommon. Many small nodules may coalesce so as to be recognizable grossly, and healing takes place with considerable scar formation. The symptomatology of the disease depends on the organs affected, and on the extent of the lesions. The usual course is benign. Lymph node involvement is extremely common. The superficial nodes are most frequently involved, but participation of the hilar nodes is also common. When the lungs are involved, infiltrations spread from the hilar regions into the parenchymal fields, as seen on X-ray films, and at times the lesions may become very extensive and coalesce forming areas of partial consolidation. Cavity formation also occurs. Bone lesions are seen in 10 to 20 per cent of the cases, and they usually consist of small circumscribed cysts in the small bones of the hands and feet. Involvement of parts of the uveal tract, with or without disease of the salivary glands, results in a characteristic clinical picture. The laboratory findings present no outstanding characteristics. Anergy to tuberculin is very common, but is not a prerequisite to making the diagnosis. The white count is normal or somewhat low. There may be neutropenia and eosinophilia. The blood globulin is often increased, so that a rise in the sedimentation time cannot be taken to mean active disease. The differential diagnosis includes Hodgkin's disease, lymphosarcoma, bronchiolitis fibrosa obliterans, tuberculosis, giant follicular hyperplasia, and a variety of skin conditions. The diagnosis can only be made by biopsy. Complete cure is possible. Even extensive pulmonary lesions have been known to disappear over a period of weeks or months. The lymph

nodes can be favorably influenced by X-ray therapy and the same treatment, in combination with carbon dioxide snow, has been successfully used for treatment of the skin lesions.—*Sarcoidosis, S. Katz, C. B. Cake & H. R. Reed, New England J. Med., September 23, 1943, 229: 498.*—(*H. Marcus*)

Sarcoidosis of Heart.—A twenty-four year old Negro, male, with sarcoidosis was seen. He developed severe dyspnoea. The electrocardiogram showed premature ventricular beats and transient ventricular tachycardia. The patient died with the symptoms and signs of severe congestive heart failure. On autopsy, noncaseating tubercle-like lesions were found in the myocardium, epicardium, endocardium, visceral pleura, lungs, spleen, liver, thoracic and upper abdominal lymph nodes, and testes. Eight cases of sarcoidosis of the heart were found in a review of the literature. Clinical evidence of heart disease was present in 3 of these cases, and sudden death occurred in another. The electrocardiogram showed no characteristic changes, but in several of the cases of massive cardiac involvement there were pronounced abnormalities of the cardiac mechanism. There seems to be little or no occasion to doubt that some of the cases reported as atypical tuberculosis, specific myocarditis, granulomatous myocarditis and myocarditis of unknown cause were, in fact, cases of sarcoidosis of the heart.—*Sarcoidosis of the Heart: Report of a Case and Review of the Literature, J. B. Johnson & R. S. Jason, Am. Heart J., February, 1944, 27: 246.*—(*G. C. Leiner*)

Lobar Pneumonia.—The authors report their experience in treating alternate members of a series of 137 cases of lobar pneumonia with sulfamezathine and sulfadiazine and compare their results with those in 354 cases treated with sulfapyridine. Sulfamezathine has two methyl groups in the pyrimidine ring with which it is hoped to overcome the factor of renal damage caused by sulfadiazine. Only true cases of lobar pneumonia are included in this study. The dosages of each drug used were identical and consisted of an initial dose of 4 g. followed by 1 g. four-hourly. As judged by case mortality, the sulfamezathine was at least equal to sulfadiazine and both drugs compared favorably with sulfapyridine. There was no very marked difference in the incidence of sequelae in the three groups, except that there was a higher incidence of pleural effusion in the sulfamezathine and sulfadiazine groups. Fever subsided sooner in the sulfapyridine group (twenty-nine hours) as compared to the sulfadiazine group (thirty-five hours) and the sulfamezathine group (forty-three hours). Toxaemic symptoms were fewer in the sulfamezathine (6 per cent) and sulfadiazine (7 per cent) groups as compared to the sulfapyridine group (52 per cent). Oliguria and gastrointestinal symptoms were absent in the sulfamezathine group. One of the cases treated with sulfamezathine showed a well marked cyanosis due to methemoglobinaemia.—*Lobar Pneumonia Treated with Sulfamezathine and Sulfadiazine, T. N. Morgan & R. Wylie-Smith, Lancet, December 11, 1943, 2: 731.*—(*J. Ballinger*)

Eosinophilic Infiltrations.—In conjunction with eosinophilic infiltrations of the lung, similar infiltrations have been reported in many other organs. This has led some to suspect the haematogenous nature of the disease, the aetiology of which is still obscure. Specific microörganisms have been recovered from the sputum in occasional cases, but never consistently so In this communication 4 cases are reported, 2 of which showed pneumococci in the sputum which could be typed. Because of this, sulfathiazole was given with good results. Over a period of years the patients showed several attacks of infiltrations in the lung, and further interest is added to the histories by the association of articular rheumatism with the lung lesion. One forty-seven year old woman also had eosinophilic otitis, and apparently multiple foci in other organs, as evidenced by purpura, tachycardia and evidence of transitory myocardial damage, encephalitis with transient hemiparesis, associated with eosinophils in the spinal fluid.—

Ein Beitrag zur Frage der Pathogenese, Ätiologie, und Therapie der eosinophilen Lungeninfiltrate, N. Alwall, Schweiz. med. Wchnschr., November 27, 1943, 73: 1438.—(H. Marcus)

Influenza B.—During an outbreak of type-B influenza in a military unit, the opportunity presented itself to compare proved cases of this type with those that were clinically characteristic of influenza but could not be assigned to either type A or type B serologically. This disease was, therefore, called type Y. As far as symptomatology, clinical course and severity of the disease are concerned, there is little difference between the three types. To diagnose the disease, the general picture is relied upon. The onset is usually sudden, with few premonitory symptoms. Coryza, cough, sore throat, headache, generalized aches and pains, sweating and a variety of other respiratory and constitutional symptoms are usually present. Abnormal physical signs in the chest are rarely found, and the X-ray findings are usually not characteristic, inasmuch as it is within normal limits. On the whole, the fever in type B is somewhat lower than in the other types, and the disease may be milder. Laboratory findings other than a significant rise of antibodies in the blood do not help to differentiate the three types.—*Clinical Study of an Outbreak of Influenza B, J. M. Stansfeld & C. H. Stuart-Harris, Lancet, December 25, 1943, 245: 789.—(H. Marcus)*

Atypical Pneumonia.—In a group of 221 cases of nonlobar (nonpneumococcus) pneumonia, the clinical and laboratory findings were found to correlate well with previously described groups of febrile episodes apparently due at least in part to infection with a filterable virus. The writers believe that the cases exhibit certain roentgenological characteristics over and above "distribution unusual to lobar pneumonia" and inconstancy within its own group. Though the roentgenological peculiarities follow the nonlobular, nonsegmental and inconstant distribution pattern described by many authors, the writers feel that this distribution pattern is followed in a more or less orderly manner both as to location and as to the progressive chronological development, even of the various "units' in the cases in which they are multiple. An infiltrative process is present at the onset; it is first progressively peribronchial from the hilum and then irregularly interbronchial; the infiltration is usually clearly definable as to limits in spite of its disregard for segmental or lobar structural limits, and usually involves more than one segment and frequently parts of more than one lobe. Multiple areas of partial or semi-consolidation soon develop through the area of infiltration, producing a "cotton-wool" appearance; they frequently coalesce by the end of six to twenty-four hours, and occasionally at the end of one to two days, if lobar in extent, may simulate lobar pneumonia. Unlike the homogeneous appearance of the consolidation in the latter, the virus pneumonia always manages to present a striated infiltrative type background. There is usually a fixed distribution of involvement for any one area by the second or third day; it then behaves as a "unit." Resolution or absorption begins by generalized and uniform progressive loss of density throughout the "unit" by the third to the fifth day. The infiltration acquires a "wire-glass" appearance or "pseudo-fibrosis." There is eventual progressive complete clearing of this process in five to fourteen days, usually five to eight days in cases of single "units." Multiple "units" occasionally develop with definite dates of onset and individual chronology and rarely involve nearly all visible parts of lung; usually no one "unit" disturbs the approximate prearranged chronology of any forestarted "unit." There are many typical cases of virus pneumonia in children after the age of six months, but rarely before this age.—*Virus Pneumonia, A. E. Seeds & M. I. Mazer, Am. J. Roentgenol., January, 1943, 49: 30.—(W. H. Merrit)*

Atypical Pneumonia.—When an unexpectedly high incidence of "atypical pneumonia" or "acute pneumonitis" was noted at Camp Claiborne, Louisiana during the summer of

1941 a commission was appointed to investigate the problem from its clinical, epidemiologic and aetiologic aspects. Data were obtained by studying cases of atypical pneumonia and related infections of the respiratory tract seen at the Station Hospital from December 9, 1941 to March 24, 1942 and by reviewing the clinical records of similar cases admitted the preceding year. Sixty-nine cases of atypical pneumonia, as differentiated from bronchitis resembling atypical pneumonia, pneumococcic pneumonia, acute tonsillitis and other diseases of the respiratory tract, were so observed; while in the hospital records 228 cases were found in which a diagnosis of atypical pneumonia could be established. Clinically the disease was found to be gradual in onset with mild to moderately severe constitutional symptoms of feverishness, headache, malaise, chilliness and occasionally rigor predominating in the early stages. These soon were followed by symptoms referable to the respiratory system: cough, coryza, sore throat, sputum and vague chest pain. The majority of the patients were not severely ill. Tachycardia and dyspnoea were typically absent and fever present, with wide variations in its range. Physical signs in the chest were usually minimal, the most characteristic being subcrepitant and "sticky" râles, and appeared relatively late. There was a fairly characteristic roentgen appearance; beginning as an increase in the hilar shadow, the infiltration spread out into a fan- or wedge-shaped, soft and either homogeneous or patchy density, fading toward the periphery. Rarely was the infiltration as dense as that of pneumococcic pneumonia and pleural effusions were not seen. Most frequently one of the lower lobes was involved but occasionally multilobular involvement was noted. The average leucocyte count ranged between 6,000 and 10,000 cells per cubic millimeter, with the differential count seldom abnormal. Urine, and cerebrospinal fluid when studied, were normal. Bacteriological examination of blood, sputum, throat washings and even bronchoscopic specimens showed no organism which could be considered as a specific aetiologic agent. The clinical course of the disease varied widely. The usual length of the febrile period was six days or longer, with defervescence by lysis. Constitutional symptoms were most often of short duration, while the cough often persisted and became productive. Physical signs in the chest, although appearing late, habitually outlasted the roentgen signs. The average stay in the hospital was 31.7 days. Complications were rare, with follicular tonsillitis, otitis media, sinusitis and a chronic cough being the only ones observed. Differential diagnosis included all of the acute diseases of the respiratory tract. Prognosis was rarely serious, only one death occurring in the cases investigated. Pathological findings in the fatal case were those of haemorrhagic interstitial bronchopneumonia, acute bronchitis, acute follicular splenitis and mesenteric lymphadenitis. The bronchitis was further investigated with bronchoscopic examinations of 10 patients, in all of whom an acute inflammatory reaction of the bronchi of involved lobes with mucopurulent secretions was noted. Treatment was entirely symptomatic and supportive; the sulfonamides were not observed to show any beneficial effects. The epidemic and endemic occurrence of atypical pneumonia was demonstrated. Weekly attack rates during an epidemic reached a peak of 88 per 100,000 while, during an endemic period, the rates varied from 20 to 42 and averaged 28 per 100,000. There was limited evidence that under frequent exposure direct transmission of the disease from patient to patient occurred, with an incubation period of approximately eighteen days. But the wide distribution throughout the camp without remarkable focal concentrations in companies or regiments could not be accounted for on this basis. No means of spread other than human contact could be demonstrated. A more tenable explanation appeared to be that cases of unrecognized and inapparent infections constituted a reservoir. Lending support to this was the fact that during the epidemic the weekly attack rates of the other acute infections of the respiratory tract roughly parallelled those for atypical

pneumonia; the incidence of atypical pneumonia was highest among those groups with the greatest exposure to all respiratory infections. Attempts to determine the aetiologic agent were unsuccessful throughout this study. No specific bacterium, fungus, rickettsia or virus, known or new, could be indicated by any means, although detailed isolation, serological and immunological studies were conducted at Camp Claiborne and in other laboratories. From suggestive but inconclusive studies it appeared that some new agent, probably a virus, is responsible for atypical pneumonia. No specific control measures could be suggested but it seemed that chilling, fatigue or previous infections of the upper respiratory tract were important in the pathogenesis of the disease. The experiences of the commission as well as those of other groups indicated that atypical pneumonia is a common disease, of importance both in the armed forces and among the civilian population.—*Primary Atypical Pneumonia, Etiology Unknown, J. H. Dingle, T. J. Abernethy, G. F. Badger, G. J. Buddingh, A. E. Feller, A. D. Langmuir, J. M. Ruegsegger & W. B. Wood, Jr., War Med., March, 1943, 3: 223.*—(*L. R. Roll*)

Atypical Pneumonia.—There can be no doubt that there has been an atypical primary bronchopneumonia prevalent in the United States in the past two years. Primary atypical pneumonia is probably a safer term although many other names have been given. The true incidence is not known for it is frequently not a reported disease, but these cases have probably outnumbered pneumococcus pneumonia about four to one. Francis and Magill were able to show that the aetiological factor was a virus, closely related to the virus of *lymphogranuloma venerum* and psittacosis. One case seen by the author also had a *Streptococcus viridans* in the unfiltered material which may explain the more stormy course of these cases. The onset is sudden with unproductive cough, dry inflammation of the throat and sometimes also of the nose, headache and general malaise. Not infrequently there is also dizziness and intense drowsiness. The temperature is usually around 102° to 104° F. for the first ten days, falling by lysis but not returning to normal before the third week. The pulse rate is low as compared to the fever, although in severe cases with much moisture the pulse rate is high and the respirations are also not greatly increased even in the presence of cyanosis. As a rule the patients do not feel extremely ill and usually do not consider themselves so. Physical signs are scanty in the early stages, consisting mostly of coarse and fine râles over the affected area. The leucocyte counts rise as the disease progresses, the average count being 10,000 and the highest 26,000. Urinalyses show approximately the same changes to be found in any prolonged acute infection. X-ray examination of the chest is necessary, as the physical signs are seldom well developed before the end of the first week. Usually the shadows spread out from the hilum and are less dense than in pneumococcus pneumonia and are more frequently found in the lower lobes. In the majority of cases more than one lobe was involved and migration from one lobe to another or one side of the chest to another was quite rapid. In only 2 cases was the appearance that of a typical pneumococcus pneumonia when no pneumococci were found. The sulfonamides were without benefit except in 2 cases with superimposed pneumococcus and streptococcus infection. The only serious complication was pleural effusion which occurred in patients giving a history of previous mild tuberculosis. Rhoads is convinced that examination of the flora of the nose, throat and sputum is necessary to determine the prognosis as secondary invaders are probably important. Most physicians will be tempted to use sulfonamides first, but, unless secondary invaders are present, the treatment is useless. If they are present, other procedures may also be used. Oxygen should be employed in those having large amounts of moisture in the bronchi.—*The Probable Incidence and Clinical Features of "Virus" Pneumonia, P. S. Rhoads, Radiology, April, 1943, 40: 327.*—(*G. F. Mitchell*)

Atypical Pneumonia.—Evidence of the disease appears in chest films about the fourth day. The findings are variable, but four groups are described. The first group is characterized by an increase in the hilar shadows and an increase in lung markings followed by pneumonic density involving one or more lobes in such a way as to appear to be a direct extension from the hilar region, the density being less than that seen in lobar pneumonia. In the second group there is a patchy infiltration, usually confined to a single lobe, suggestive of a bronchopneumonia. The initial resolution in this group is rapid. Group three shows infiltrations radiating from the hilus and subsequently extending to involve an entire lobe. This type is almost indistinguishable from tuberculosis, especially when the upper lobe is involved. Serial films are valuable in arriving at the true diagnosis. The fourth group of cases have increased lung markings throughout with involvement of one side of the chest or more by small parenchymal infiltrations somewhat resembling miliary tuberculosis. Patients in this group are very ill and the course of the disease is long. Caution has been necessary in differentiating lesions in the upper chest from tuberculosis. Study of the patient and serial films lead to the true diagnosis. In lesions of the bases, while the diaphragm remains uninvolved, there may be an elevation of the affected side. Pleural adhesions seldom develop. Illustrative cases are presented.—*Primary Atypical Pneumonia of Unknown Etiology, P. V. McCarthy, Radiology, April, 1943, 40: 344.—(G. F. Mitchell)*

Atypical Pneumonia.—Primary atypical pneumonia as found at Camp Davis was first noted when, on two occasions, X-ray changes were interpreted as showing minimal pulmonary tuberculosis, only to find on subsequent X-rays that the lesion had disappeared. The conclusions drawn from a series of over 100 cases are as follows: The diagnosis depends on both the clinical and the X-ray findings. The chief complaints in the order of frequency are general malaise, weakness, nonproductive cough, fever and generalized body pains. Physical findings are noticeably absent early in the disease and often are absent until the diagnosis has been made. The white blood count behaves in a striking manner, remaining normal during the height of the fever and at the time of the early X-ray findings and later rising to 14,000 or 15,000 during resolution and at the height of the physical findings. No leucopenia was encountered. Other laboratory findings are of value only in a negative way. The disease does not respond to chemotherapy. The pulse is relatively slow. Many cases would probably go undiagnosed were it not for the frequent X-ray examinations made in all cases of moderately severe respiratory infection. Thus in persons having typical symptoms in whom the fever remains elevated, a chest X-ray examination is requested. The X-ray examination, then, becomes the deciding factor. Usually there is thickening of one or both hilar shadows and a patchy peribronchial infiltration is seen along the basilar branches of one of the inferior lobe bronchi. These patches may have a tendency to become confluent and often do to the extent that the disease appears to be lobar. There may also be a thickening of the visceral pleura over the involved lobe producing a more or less homogeneous shadow suggestive of lobar pneumonia. X-ray films taken during resolution also show a patchy type of peribronchial infiltration. The lesion may involve one or all branches of a major bronchus or several lobes may be involved at the same time. The patient is usually incapacitated for two or three weeks and recurrences frequently occur if the patient gets out too early. The author warns that in the interpretation of survey films this disease entity should be kept in mind, for with reasonable care many able men may be saved for military duty.—*Primary Atypical Pneumonia of Unknown Etiology, F. C. Curtzwiler & B. E. Moore, Radiology, April, 1943, 40: 347.—(G. F. Mitchell)*

Atypical Pneumonia.—A case of atypical pneumonia with death from encephalitis is

described. The patient was a twenty year old American soldier admitted to a hospital in England with a twenty-four-hour history of cough, sore throat and pains in the chest and arms. On admission the temperature was 101.2°F., he appeared moderately prostrated. There was reddening of the tonsils and pharynx. The lungs were clear. Radiograph of the chest one week after admission revealed bilateral patchy infiltrations and a large area of consolidation in the right lower lobe. Sulphadiazine therapy was of no avail. The temperature mounted and severe dyspnoea and cyanosis developed by the eighth day. On the sixth day sulphadiazine therapy was discontinued and the patient was given a transfusion of 125 cc. of blood from another patient three weeks convalescent from severe atypical pneumonia. There was marked symptomatic improvement with drop of temperature to normal within five hours. However, the next day severe headache ensued, fever recurred and soon thereafter neck rigidity was noted. Despite two subsequent transfusions of blood from convalescents of atypical pneumonia and resumption of sulphadiazine therapy, a rapid downhill course ensued and patient died eleven days after onset of illness. Postmortem examination revealed swelling and congestion of the bronchi, alveoli filled with exudate composed of mononuclears and polymorphonuclear cells and areas of lobular and confluent lobular consolidation with miliary areas of necrosis. No inclusion bodies could be found. Examination of the brain revealed many pin-head areas of lymphocytic perivascular infiltrations with scattered "ring" haemorrhages in the gray and white matter. The final diagnoses were: (*1*) pneumonia—primary, atypical, of lobular and confluent lobular type—with ulcerative bronchitis and membranous and interstitial pneumonitis; and (*2*) encephalitis—acute. Of interest in this case are: (*1*) improvement, even though temporary, with the use of convalescent blood from a case of severe atypical pneumonia, and (*2*) death from a complication—encephalitis.—*A Fatal Case of Atypical Pneumonia with Encephalitis, H. Perrone & M. Wright, Brit. M. J., July 7, 1943, 2: 68.*—(*D. H. Cohen*)

Atypical Pneumonia.—Seven hundred and thirty-eight cases of atypical pneumonia were recognized during 1942 at the Station Hospital, Scott Field, Illinois. Serious complications were rare; there were no fatalities. The disease showed epidemic tendencies during the late summer and fall when common diseases of the respiratory tract were at a minimum. Seasonal clinical variations were apparent. Atypical pneumonia attacks congregated groups of people, especially young adults. The degree of contagion and the recoverability of the aetiological agent seem to vary with the severity of the illness. After an incubation period of one to three weeks, there develops in the exposed person a nonproductive cough, accompanied or followed by fever, aching, weakness and loss of appetite. Cough is the most troublesome symptom but tends to be relieved within a few days as the fever diminishes by lysis. The pulse rate, the respiratory rate and the leucocyte count are little elevated in uncomplicated cases and there is a lack of such clear-cut findings as are observed with pneumococcic pneumonia. Prolonged convalescence is the rule, and, if a patient is seen for the first time during convalescence, neurocirculatory asthenia may be suggested. Complications are uncommon, but the occasional development of effusion and empyema warrants recognition of the primary disease. From a military standpoint the time lost is significant. Over 20,000 man-days (or 55 man-years) were lost at Scott Field during 1942 from atypical pneumonia.—*Primary Atypical Pneumonia: An Analysis of Seven Hundred and Thirty-eight Cases Occurring during 1942 at Scott Field, Illinois, C. A. Owen, Arch. Int. Med., March, 1944, 73: 217.*—(*G. C. Leiner*)

Atypical Pneumonia.—In the Station Hospital at Hunter Field, primary atypical pneumonia or virus pneumonia was found in 125 cases between January and December, 1942. Of these patients, one died. The autopsy

findings were similar to those in influenza: The bronchi were filled with a creamy, viscid, yellow exudate. The bronchial mucosa was haemorrhagic. There were no definite areas of consolidation in the lungs. Miliary-sized areas of infiltration were scattered throughout both lungs. The microscopical examination showed interstitial pneumonia and purulent bronchitis. Most of the patients complained first of malaise, headache, chilliness, loss of appetite, rhinorrhoea and pharyngitis. This prodrome lasts one to three days. Cough may occur early, it becomes later productive. Streaking or haemoptysis may occur. Cyanosis develops in the severely ill patients. The fever has a remittent character and lasts seven to ten days and ends with a lysis. Physical signs are scant. Roentgenological examination reveals the first changes on the second or third day, consisting in exaggeration of the bronchial markings. Later mottled densities appear. Pleural thickening or exudate are rare. In severely ill patients the picture may resemble miliary tuberculosis. Sputum cultures usually show micrococcus catarrhalis, nonhaemolytic streptococci and occasional pneumococci of the higher groups. The leucocyte count is normal or slightly above normal. The treatment is symptomatic. Oxygen by tent or mask was given to all seriously ill patients. Sulfa drugs are not effective.—*Primary Atypical Pneumonia: Report of One Hundred and Twenty-five Cases, with Autopsy Observations in One Fatal Case, R. J. Needles & P. D. Gilbert, Arch. Int. Med., February, 1944, 73: 113.—(G. C. Leiner)*

Pleuropulmonary Tularaemia.—Tularaemia, found in every state of the Union and in Canada carries a fatality of 5 to 6 per cent. The fatality rises sharply with pleuropulmonary disease. This pneumonic process, first reported by Verbrycke and demonstrated roentgenographically by Santé, has received little attention from the viewpoint of the roentgenologist. The roentgenological findings, as seen in a series of 81 cases observed at St. Louis City Hospital and St. Mary's Hospital for the past five years, are presented. The fatality is 9.7 per cent, all but one of whom had pulmonary complications. Complaints referable to the chest are frequently overlooked, but were present in 36. After the roentgen examination, cases were divided into two groups—the first including the ulcero-glandular, glandular and oculoglandular and the second group consisting of the typhoidal type. In the former were 72 cases, 27 of whom had symptoms or physical signs referable to the chest. In 19 of these, beginning hilar adenopathy was found and 14 subsequently developed parenchymal disease. Two cases without symptoms showed hilar and parenchymal involvement. In this group of 19 with pleuropulmonary involvement there were 4 deaths, but only one among the remaining 53. The most constant roentgen findings were enlarged and nodular hilar nodes usually occurring early in the disease and often not noticed until the lung markings from the hilum to the parenchyma became exaggerated; later this often was followed by parenchymal consolidation extending from the hilum into the lung parenchyma or to the pleura. Later there is extension into the parenchyma through the lymph channels. In the typhoidal group, chest symptoms and hilar adenopathy were present in all 9; 7 having pneumonia, one developing a lung abscess and 3 terminating fatally. In these there was early parenchymal involvement without hilar adenopathy followed by consolidation with or without abscess formation. Four cases are given in detail. The authors believe that there are two basic types of pleuropulmonary involvement in tularaemia: one characterized by hilar adenopathy without subsequent retrograde extension into the parenchyma or even into the pleura producing effusion and the other, not preceded by hilar adenopathy, but primarily involving the lung parenchyma and roentgenographically by large homogeneous consolidations resembling pneumonia, the latter occurring chiefly in the typhoidal type of the disease. There is a striking similarity of tularaemia to bubonic plague. As in tularaemia, the glandular form is more common and in the rare pneumonic form, the

toxicity is severe and the fatality high as in typhoidal tularaemia. Pathologically there is severe necrosis in both and inflammatory reaction not concomitant with the extent of the necrosis. It is possible both are similar roentgenologically.—*Roentgenological Manifestations of Pleuropulmonary Involvement in Tularemia, F. E. Bihss & H. I. Berland, Radiology, November, 1943, 41: 431.*—*(G. F. Mitchell)*

Pulmonary Actinomycosis.—The authors report a case of pulmonary actinomycosis in a patient with arrested pulmonary tuberculosis in which the orally administered sulfonamides apparently resulted in a cure. Iodides were also used during the period of seven months of treatment and, in spite of the administration of 1,800 g. of potassium iodide, there was no evident reactivation of the tuberculosis.—*Pulmonary Actinomycosis, N. H. Pillsbury & J. D. Wassersug, New England J. Med., January 20, 1944, 230: 72.*—*(J. Ballinger)*

The Roentgenogram and Some Chronic Nontuberculous Pulmonary Conditions.—Cases of aleukaemic lymphadenosis with pulmonary infiltration, calcicosis of the lungs, primary adenocarcinoma of the right lung, hypernephroma of the left kidney with metastasis to the lungs and Boeck's sarcoidosis are presented because of the erroneous diagnosis of pulmonary tuberculosis, based solely on roentgenological findings. A plea is made not to overemphasize the roentgenogram to the exclusion of other diagnostic procedures. It cannot be emphasized too strongly that when a patient with active tuberculosis expectorates sputum which originates below the tracheal bifurcation, tubercle bacilli should be demonstrable. In the absence of a positive sputum, an investigation for nontuberculous pulmonary disease should be made. —*The Roentgenogram and Some Chronic Nontuberculous Pulmonary Conditions, A. Rest, Am. J. Roentgenol., April, 1944, 51: 434.*—*(W. H. Merril)*

Bronchiectasis.—Bronchiectasis is curable by radical means in a reasonable number of cases. Its curability depends on early recognition while it is still localized and while the patient is still young enough to undergo surgical treatment with minimal risk. Less than 10 per cent of patients with severe bronchiectasis obtain satisfactory results from any form of medical treatment. The mortality varies from 30 to 50 per cent within ten to fifteen years after the diagnosis is made. Every patient who has had an acute pulmonary infection such as pneumonia should be followed roentgenographically until the lesion has completely disappeared. This is especially important in infants and children and in cases where the lesion has had any appearance suggesting atelectasis or the physical signs have suggested incomplete aeration. If the infiltration persists for several weeks after the infection, incipient bronchiectasis must be considered. Bronchoscopy may establish drainage and prevent progressing bronchiectasis in postpneumonic sequelae and in acute recurrent pulmonary infections. There are also congenital types of bronchiectasis associated with developmental anomalies. Bronchiectasis of the upper lobe is especially important due to the frequency with which it is confused with tuberculosis. It often occurs in the absence of chronic expectoration or abnormal X-ray findings. Recurrent pulmonary haemorrhage or irritative cough may send these patients to the physician and diagnosis can be made by bronchogram. In basal pulmonary lesions, it is extremely important to distinguish carcinoma from bronchiectasis. Carcinoma is more likely to be unilateral, of recent origin, to produce few, mild or no symptoms, or to produce progressive symptoms, and to be unassociated with a history of an acute respiratory infection. The X-ray lesion may be due to bronchiectasis produced by bronchial obstruction due to a tumor. Early bronchoscopy is a valuable diagnostic aid and should always precede bronchography. Frequently bronchography fails to demonstrate a neoplastic obstruction while incomplete fill-

ing of a bronchus may simulate obstruction.—*Some Clinical Problems in Bronchiectasis, H. C. Hinshaw & H. W. Schmidt, Dis. of Chest, March–April, 1944, 10: 115.*—(*K. R. Boucot*)

Bronchiectasis and Fibrosis of Pancreas.—Cystic fibrosis of the pancreas leads to nutritional disturbances in infants and newborns which in the past have been grouped under the heading of celiac disease. It became apparent, however, that the two were different, and that bronchiectasis is frequently associated with fibrosis of the pancreas, and the combination of the two results in a characteristic symptom complex. Either the respiratory or the intestinal symptoms may predominate. Whereas celiac disease manifests itself usually in children between one and three, this disease is usually observed in the newborn and in infancy. Both diseases give rise to bulky fatty stools, but in celiac disease the fats are well split, whereas in cystic fibrosis the fats are not split. This is due to a practically total absence of pancreatic enzymes from the intestinal tract in this disease, whereas the pancreatic lipase, diastase and trypsin usually show normal values in celiac disease. Of 43 cases observed by the authors, only 8 survived the second year, an index of the serious nature of the illness. Death occurs from malnutrition and bronchopneumonia. Autopsy shows that the pancreas is infiltrated with round cells and that the connective tissue is increased. The number and size of the cysts vary, and the impression is gained that the cysts are formed by obstruction of the ducts rather than representing actual malformations. Cystic changes in other organs are lacking, so that there is no connection between this disease and generalized cystic disease, affecting the kidneys, liver or other organs. The lungs show extensive bronchiectases; any or all lobes may be involved. There is usually purulent bronchitis, and a high association with chronic sinusitis. The disease is congenital and familial. Out of 25 families observed, more than one case occurred in 15 families, and in 3 families the sick child was the only pregnancy. Other members of the family are not affected, and usually the children are born to healthy parents. Consanguinity plays no rôle. The aetiology is obscure. The disease is believed to originate in early intrauterine life rather than representing a defect in the germ plasm. Inasmuch as lack of vitamin A in rats is known to cause bronchiectasis experimentally, a lack of vitamin A in the mother has been suggested as the cause. However, large parenteral doses of this vitamin administered to a mother who had previously had sick children failed to produce a normal child. In view of the high probability of having more sick children once one afflicted with this disease is born, parents should be discouraged from further pregnancies. The diagnosis is made on the presence of typical intestinal symptoms in combination with respiratory symptoms. When the latter occupy the foreground, the disease is easily confused with whooping cough. Treatment is difficult. A combination of mother's milk from which the fat has been removed and buttermilk has been found best for infant feeding. Fats in any form are harmful. Preparations of pancreatic enzymes are most helpful, and the response to their administration is another point separating this disease from celiac disease. The fat soluble vitamins are given separately in adequate doses. Fresh air and the avoidance of respiratory infections are valuable adjuncts.—*Die familiäre Pankreasfibrose mit Bronchiektasien, G. Fanconi & A. Botsztejn, Schweiz. med. Wchnschr., January 29, 1944, 74: 85.*—(*H. Marcus*)

Pneumonitis Complicating Cardiospasm.—Pneumonitis complicating cardiospasm does not appear to be a very common condition. Even more uncommon have been reports of the isolation of nonpathogenic acid-fast organisms from the sputum in this condition. Two cases have been reported in the literature in which nonpathogenic acid-fast bacilli have been found in the sputum. A third case, who was felt to have a cardiospasm of

twenty years' duration, is presented. By unconsciously aspirating food, probably during sleep, she had developed a chronic bilateral indurative pneumonia. Stereoroentgenograms of the chest showed mottled densities throughout the lung field on the right with consolidation from the level of the third to the seventh vertebral spines. On the left, there were conglomerate patches in the lower lobe. Physical examination was noncontributory except for the lungs. There were signs of infiltration with medium and fine râles over the areas of disease seen in the X-ray film. A tuberculin test was highly positive to the second strength of purified protein derivative. Barium was retained in the oesophagus for as long as ten hours, revealing obstruction at the cardiac orifice. The lower third of the oesophagus was mildly and uniformly dilated. Two specimens of sputum raised from the lungs contained large numbers of acid-fast bacilli. Morphological y these were similar to tubercle bacilli, although a few acid-fast coccoid bodies were also present. The organism grew well in Hamburg broth in twenty-four hours. On dextrose agar after forty-eight hours the colonies were smooth and had a light cream color taking on an orange tinge as the culture aged. No carbohydrates were fermented. After several subcultures the morphology changed markedly. The rods disappeared, leaving mostly acid-resistant deep staining coccoid bodies with some fine faintly staining filamentous forms. Guinea pigs inoculated with the bacteria did not develop tuberculosis nor did they become sensitized to Old Tuberculin. The patient reacted to a tuberculin made from cultures of this saprophyte, 0.1 mg. produced an area of erythema measuring 3.5 x 4.0 cm. and marked induration. A control test with 0.1 mg. of Old Tuberculin produced an area of erythema 4.5 x 6.5 cm. with pronounced induration. Two of 12 patients with active pulmonary tuberculosis reacted to 1.0 mg. of the autogenous tuberculin with a mild but typical positive reaction. All 12 reacted strongly to 0.1 mg. of regular Old Tuberculin. This report of another case of aspiration pneumonitis, secondary to cardiospasm, in which acid-fast bacilli have been found in the sputum, would suggest a relationship that is more than accidental. As proposed by Baldwin, a logical explanation for the source of the nonpathogenic acid-fast bacilli is to be found in the aspiration of food particles from the oesophagus into the lungs. There the organism may become established and occasionally make its appearance in the sputum. Similar nonpathogenic acid-fast organisms have been cultured from many raw fruits and vegetables. The finding of these acid-fast rods in the sputum on direct smear is of definite interest. The differentiation between them and tubercle bacilli on the basis of their morphological characteristics would be extremely difficult. Thorough bacteriological studies should be performed on any patient suspected of having an aspiration pneumonitis in which acid-fast organisms are found in the sputum. Otherwise a mistaken diagnosis of pulmonary tuberculosis may readily be made. The short length of time during which the acid-fast bacilli were found in the sputum and the rapidity with which they changed to coccoid forms may explain why more of these cases have not been reported.—*Chronic Indurative Pneumonia Resulting from Cardiospasm: A Case with Nonpathogenic Acid-fast Bacilli in the Sputum, F. C. Warring, Jr. & A. B. Rilance, J. Lab. & Clin. Med., October, 1943, 28: 1591.*—(*F. G. Petrik*)

Retention of Lipiodol.—A case is reported in which lipiodol was retained more than two years after instillation. There was no apparent obstruction. Two or three days following the administration of the oil the patient developed angio-neurotic oedema and his temperature remained elevated for three weeks.—*Long Pulmonary Retention of Lipiodol, F. B. Sheldon, Radiology, April, 1943, 40: 403.*—(*G. F. Mitchell*)

INDEX OF ABSTRACTS

Abernethy, T. J. See Dingle, J. H., *et al.*, 54
Actinomycosis of chest, 2
——, Pulmonary, 60
——, Treatment of, 1
Adenoma, Bronchial, 13, 14
Adhesions, Pleural, 8
Agents, psittacosis-like, Classification of, 10
Alveolar cell tumor, 14
—— lining, 44
Alwall, N. Eosinophilic infiltrations, 53
Andosca, J. B., and Foley, J. A. Basal tuberculosis, 30
Araya, E. See Battro, A., *et al.*, 48
Ardao, H. A., Purriel, P., and Cassinelli, J. F. Cancer and pulmonary tuberculosis, 16
Army, Fluoroscopy in, 24, 25
——, Tuberculosis in, 26
Artificial pneumothorax, 33
Asbestosis, Pulmonary, and carcinoma, 15
Asthma, Morphine in, 8
Asthmatoid respiration, Bronchoscopy and, 8
Atelectasis, Postoperative, 3
——, Pulmonary infarction and, 3
——, Reflex, 3
Atypical pneumonia, 54, 56, 57, 58
Auerbach, O. Generalized miliary tuberculosis, 31
——, ——., and Stemmerman, M. G. Congenital heart disease and tuberculosis, 30
Aufses, A. F. Bronchiectasis caused by bronchial tuberculosis, 33

Bachmann, E. Prophylaxis of tuberculosis, 21
Bacilli, tubercle, bovine, Growth of, with pyruvate, 43
——, ——, Survival of, in glycerol, 43
Bacillus, tubercle, Polysaccharide from, 43
Badger, G. F. See Dingle, J. H., *et al.*, 54
Baltrons, A. F. See Valledor, T., *et al.*, 6
Bartholin, E., and Oyanguren, H. Silicosis, 5
Basal tuberculosis, 30
Battro, A., González Segura, R., Eliçabe, C. A., and Araya, E. Respiration and blood pressure, 48
Bauer, L. See Kenny, G. E., *et al.*, 51
Beck, M. D., Eaton, M. D., and O'Donnel, R. Classification of psittacosis-like agents, 10
Benzençon, C., Cornu, G., Pache, H., Rochat, P., and Urech, E. Epidemiology in a village, 19
Berland, H. I., and Bihss, F. E. Pleuropulmonary tularaemia, 59
Berman, J. K. Nontuberculous empyema in children, 9
Berry, F. B., and Harrison, A. W. Results of thoracoplasty, 37
Bersack, S. R. Hodgkin's disease, 12
Bihss, F. E., and Berland, H. I. Pleuropulmonary tularaemia, 59
Bill, A. H., Jr., and Ladd, W. E. Actinomycosis of chest, 2
Bloch, R. G. Ghon's tubercle, 28
Blood iron in tuberculosis, 48
—— pressure, Respiration and, 48
Boissevain, C. H. Growth of bovine tubercle bacilli with pyruvate, 43
——, ——. ——. Survival of tubercle bacilli in glycerol, 43
Botsztejn, A., and Fanconi, G. Bronchiectasis and fibrosis of pancreas, 61
Bovine tubercle bacilli, Growth of, with pyruvate, 43
—— tuberculosis, 43
Boyd, E. M., Perry, W. F., and Stevens, Mary E. T. Function of tracheal mucosa, 45
Bradshaw, H. H., and O'Neill, J. F. Bronchiectasis, 4
Brock, J. F. Morphine in asthma, 8
Brody, H. Lipid granulomatosis of lung, 5
Bronchial adenoma, 13, 14
—— tuberculosis, Bronchiectasis caused by, 33
—— ——, Pneumothorax in presence of, 35
Bronchiectasis, 4, 60
—— and fibrosis of pancreas, 61
—— caused by bronchial tuberculosis, 33
——, Myocarditis in, 9
Bronchoscopy and asthmatoid respiration, 8
Brunner, A. Intracavitary drainage, 38
Buddingh, G. J. See Dingle, J. H., *et al.*, 54
Buxton, R. W., and O'Rourke, P. V. Thoracoplasty with contralateral pneumothorax, 38

Cake, C. B. See Katz, S., *et al.*, 52
Camalier, W., Jr., and Sprunt, D. H. Reaction of lung to toxins, 9
Cancer and pulmonary tuberculosis, 16
Candida albicans infection, 2
Capacity, Vital, under water, 46
Carcinoma, Pulmonary asbestosis and, 15

Cardiospasm, Pneumonitis complicating, 61
Cassinelli, J. F. See Ardao, H. A., *et al.*, 16
Castleman, B. Pulmonary infarction and atelectasis, 3
Cavities, Tension, 39
Cell, Alveolar, tumor, 14
Chapman, E. M., and Goldstein, A. Physics of sound, 46
Chest, Actinomycosis of, 2
Chesterman, J. Postlobectomy collapse of lung, 41
Chicago, Tuberculosis control in, 21
Children, Cystic disease in, 6
——, Nontuberculous empyema in, 9
——, Tuberculosis among, 23
Chronic nontuberculous pulmonary conditions, The roentgenogram and some, 60
Circulation, Pulmonary and coronary, 46
Circulatory pressures and cough, 47
Classification of psittacosis-like agents, 10
Coblenz, A., and Saccone, A. Endothelioma of pleura, 16
Coccidioidomycosis, 1
Coffee, H., and Lipton, S. Tuberculosis of spleen, 50
Cohen, S. E. See Kenny, G. E., *et al.*, 51
Cold haemagglutination in tuberculosis, 41
Collapse of lung, Postlobectomy, 41
Congenital heart disease and tuberculosis, 30
Contralateral pneumothorax, Thoracoplasty with, 38
Control, Tuberculosis, in Chicago, 21
——, ——, Procedures in, 22
Cornu, G. See Benzençon, C., *et al.*, 19
Coronary circulation, Pulmonary and, 46
Cough, Circulatory pressures and, 47
Curtzwiler, F. C., and Moore, B. E. Atypical pneumonia, 57
Cystic disease in children, 6

Damage, X-ray, Fluoroscopy and, 23
Davis, C. L. See Geever, E. F., *et al.*, 44
Davison, R., and Troy, E. P. Tuberculosis control in Chicago, 21
De, K. N. See Sen, P. K., *et al.*, 35
Diagnosis, Early, of pulmonary tuberculosis, 28
——, Laboratory, of tuberculosis, 42
Dingle, J. H., Abernethy, T. J., Badger, G. F., Buddingh, G. J., Feller, A. E., Langmuir, A. D., Ruegsegger, J. M., and Wood, W. B., Jr. Atypical pneumonia, 54
Disease, Cystic, in children, 6
—, heart, Congenital, and tuberculosis, 30
— Hodgkin's, 12
Disease, Weil's, Pulmonary lesion in, 4
Disqualifying tuberculosis, 25
Drainage, Intracavitary, 38
Dublin, L. I. Tuberculosis in veterans, 26
Dunlap, C. E., and Wells, H. G. Ossification in lungs, 10
Dysgerminoma with tuberculoid reaction, 17

Early diagnosis of pulmonary tuberculosis, 28
Eaton, M. D. See Beck, M. D., *et al.*, 10
Edwards, H. R., and Robins, A. B. Procedures in tuberculosis control, 22
Effusion in pneumothorax, 35, 36
Eliçabe, C. A. See Battro, A., *et al.*, 48
Emphysema, Mediastinal, 12
Empyema, Nontuberculous, in children, 9
Endemic, Tuberculosis, 20
Endothelioma of pleura, 16
Eosinophilic infiltrations, 53
Epidemiology in a village, 19
—— of tuberculosis, 19
Examination, Induction, 25
Extrapleural pneumothorax, 36

Fanconi, G., and Botsztejn, A. Bronchiectasis and fibrosis of pancreas, 61
Feller, A. E. See Dingle, J. H., *et al.*, 54
Fibrosis of pancreas, Bronchiectasis and, 61
Fluorescence microscopy, 42
Fluoroscopy and X-ray damage, 23
—— in Army, 24, 25
Foley, J. A., and Andosca, J. B. Basal tuberculosis, 30
——, ——. ——., —— Kropp, G. V. Polysaccharide from tubercle bacillus, 43
Francisco, R. Tuberculosis of spleen, 49
Frei, C. Fluoroscopy in Army, 25
Frenkel, D. See Nathanson, L., *et al.*, 5
Fried, B. M. Pulmonary osteoarthropathy, 10
Friedberg, S. A. Bronchoscopy and asthmatoid respiration, 8
Frimodt-Möller, J. Intestinal tuberculosis, 51
Function of tracheal mucosa, 45
Fuste, R., See Valledor, T., *et al.*, 6

Gass, R. S. See Stewart, H. C., *et al.*, 19
Geever, E. F., and Neubuerger, K. T. Alveolar cell tumor, 14
——, ——. ——., Neubuerger, K. T., and Davis, C. L. Alveolar lining, 44
Generalized miliary tuberculosis, 31
Genito-urinary tuberculosis, 51
Ghon's tubercle, 28

Gilbert, P. D., and Needles, R. J. Atypical pneumonia, 58
Giroux, M. Bovine tuberculosis, 43
Glycerol, Survival of tubercle bacilli in, 43
Goldstein, A., and Chapman, E. M. Physics of sound, 46
González Segura, R. See Battro, A., *et al.*, 48
Goorwitch, J. Harmlessness of thoracoscopy, 36
Graham, E. A. Pneumonectomy, 40
Granulomatosis, Lipid, of lung, 5
Growth of bovine tubercle bacilli with pyruvate, 43

Haemagglutination, Cold, in tuberculosis, 41
Hamilton, W. F., and Mayo, J. P. Vital capacity under water, 46
——, ——. ——., Woodbury, P. A., and Harper, H. T., Jr. Circulatory pressures and cough, 47
Harmlessness of thoracoscopy, 36
Harper, H. T., Jr. See Hamilton, W. F., *et al.*, 47
Harrington, F. E. See Torres, F. E., *et al.*, 23
Harris, W. H., Jr. Bronchial adenoma, 13
Harrison, A. W., and Berry, F. B. Results of thoracoplasty, 37
Heart disease, Congenital, and tuberculosis, 30
——, Sarcoidosis of, 53
Heller, E. L. Dysgerminoma with tuberculoid reaction, 17
Hinshaw, H. C., and Schmidt, H. W. Bronchiectasis, 60
Hodgkin's disease, 12
Hoffman, A. M., Pobirs, F. W., and Merliss, R. Mediastinal emphysema, 12
Holman, E. Technique of first-stage thoracoplasty, 37
Homburger, F. Pulmonary asbestosis and carcinoma, 15
Households, Tuberculosis in, in Williamstown County, Tennessee, 19
Hudon, F. Postoperative atelectasis, 3
Hull, E. Tuberculosis and pregnancy, 30
Hydatidosis, 5
Hyde, R. W., and Zacks, D. Socio-economic aspects of tuberculosis, 22

Induction examination, 25
Infarction, Pulmonary, and atelectasis, 3
Infection, Candida albicans, 2
Infiltrations, Eosinophilic, 53
Influenza B, 54
Intestinal tuberculosis, 51
Intracavitary drainage, 38
Iron, Blood, in tuberculosis, 48

Jacobi, M. See Nathanson, L., *et al.*, 5
Jason, R. S., and Johnson, J. B. Sarcoidosis of heart, 53
Johnson, J. Pneumonectomy, 17
Johnson, J. B., and Jason, R. S. Sarcoidosis of heart, 53

Katz, S., Cake, C. B., and Reed, H. R. Sarcoidosis, 52
Kenny, G. E., Cohen, S. E., and Bauer, L. Genito-urinary tuberculosis, 51
Koons, M. E. Laboratory diagnosis of tuberculosis, 42
Krautman, B., and Siffert, R. S. Cold haemagglutination in tuberculosis, 41
Kroetz, C. Pulmonary and coronary circulation, 46
Kropp, G. V., and Foley, J. A. Polysaccharide from tubercle bacillus, 43
Kunstler, W. E., and Vineberg, A. M. Tension cavities, 39

Laboratory diagnosis of tuberculosis, 42
Ladd, W. E., and Bill, A. H., Jr. Actinomycosis of chest, 2
Langmuir, A. D. See Dingle, J. H., *et al.*, 54
Lee, H. I. Fluorescence microscopy, 42
Lees, H. D. Tuberculosis among freshman college students, 27
Leitner, St. J. Tuberculosis of lymphatic system, 49
Lesion, Pulmonary, in Weil's disease, 4
Levitin, J. Stereoscopic photoroentgenology, 28
Ligation of vein for thrombophlebitis, 11
Lipid granulomatosis of lung, 5
Lipiodol, Retention of, 62
Lipoid pneumonia, 5
Lipton, S., and Coffee, H. Tuberculosis of spleen, 50
Lobar pneumonia, 53
Long, E. R., and Stearns, W. H. Induction examination, 25
Lowry, T. Bronchial adenoma, 13
Lung, collapse of, Postlobectomy, 41
——, Lipid granulomatosis of, 5
——, Reaction of, to toxins, 9
Lungs, Ossification in, 10
Lymphatic system, Tuberculosis of, 49

Martel, E. See Valledor, T., *et al.*, 6
Mayo, J. P., and Hamilton, W. F. Vital capacity under water, 46
Mazer, M. I., and Seeds, A. E. Atypical pneumonia, 54
McCarthy, P. V. Atypical pneumonia, 57
Mediastinal emphysema, 12
Mendoza, R. G. Triangular paramediastinal shadows, 7
Merkle, C. Treatment of actinomycosis, 1
Merliss, R. See Hoffman, A. M., *et al.*, 12
Miale, J. B. Candida albicans infection, 2
Microscopy, Fluorescence, 42
Mihran, M. K. Early diagnosis of pulmonary tuberculosis, 28
Miliary tuberculosis, Generalized, 31
Moeschlin, S. Pulmonary lesion in Weil's disease, 4
Monkeys, Rectal tuberculosis in, 52
Moore, B. E., and Curtzwiler, F. C. Atypical pneumonia, 57
Morel, C., and Rivas, C. I. Hydatidosis, 5
Morgan, T. N., and Wylie-Smith, R. Lobar pneumonia, 53
Morphine in asthma, 8
Munson, L. Pulmonary tuberculosis in paretics, 33
Murray, F. Primary tuberculosis, 29
Myers, J. A. See Torres, F. E., *et al.*, 23
Myocarditis in bronchiectasis, 9

Nathanson, L., Frenkel, D., and Jacobi, M. Lipoid pneumonia, 5
Needles, R. J., and Gilbert, P. D. Atypical pneumonia, 58
Neubuerger, K. T., and Geever, E. F. Alveolar cell tumor, 14
——, ——. ——. See Geever, E. F., *et al.*, 44
Nontuberculous empyema in children, 9
—— pulmonary conditions, chronic, The roentgenogram and some, 60

O'Donnel, R. See Beck, M. D., *et al.*, 10
O'Neill, J. F., and Bradshaw, H. H. Bronchiectasis, 4
Oral mucosa, Tuberculosis of, 50
O'Rourke, P. V., and Buxton, R. W. Thoracoplasty with contralateral pneumothorax, 38
Ossification in lungs, 10
Osteoarthropathy, Pulmonary, 10
Owen, C. A. Atypical pneumonia, 58
Oyanguren, H., and Bartholin, E. Silicosis, 5

Pache, H. See Benzençon, C., *et al.*, 19
Palik, E. E., and Schenken, J. R. Coccidioidomycosis, 1
Pancreas, fibrosis of, Bronchiectasis and, 61
Parada, Dr. Reflex atelectasis, 3
Paramediastinal shadows, Triangular, 7
Paretics, Pulmonary tuberculosis in, 33
Perrone, H., and Wright, M. Atypical pneumonia, 57
Perry, W. F. See Boyd, E. M., *et al.*, 45
Photoroentgenology, Stereoscopic, 28
Phthiocerol, 44
Physics of sound, 46
Pillsbury, N. H., and Wassersug, J. D. Pulmonary actinomycosis, 60
Pleura, Endothelioma of, 16
Pleural adhesions, 8
Pleuropulmonary tularaemia, 59
Pneumonectomy, 17, 40
Pneumonia, Lipoid, 5
——, Lobar, 53
Pneumonitis complicating cardiospasm, 61
——, Radiation, 12
Pneumothorax, Artificial, 33
——, contralateral, Thoracoplasty with, 38
——, Effusion in, 35, 36
——, Extrapleural, 36
—— in presence of bronchial tuberculosis, 35
Pobirs, F. W. See Hoffman, A. M., *et al.*, 12
Polysaccharide from tubercle bacillus, 43
Postlobectomy collapse of lung, 41
Postoperative atelectasis, 3
Pregnancy, Tuberculosis and, 30
Pressures, Circulatory, and cough, 47
Primary tuberculosis, 29
Prophylaxis of tuberculosis, 21
Psittacosis-like agents, Classification of, 10
Puffer, Ruth R. See Stewart, H. C., *et al.*, 19
Pulmonary actinomycosis, 60
—— and coronary circulation, 46
—— asbestosis and carcinoma, 15
—— conditions, nontuberculous, chronic, The roentgenogram and some, 60
—— infarction and atelectasis, 3
—— lesion in Weil's disease, 4
—— osteoarthropathy, 10
—— tuberculosis, Cancer and, 16
—— ——, Early diagnosis of, 28
—— —— in paretics, 33
Purriel, P. See Ardao, H. A., *et al.*, 16

Radiation pneumonitis, 12
Rafferty, T. N. Artificial pneumothorax, 33

Rafferty, T. N., and Shields, D. O. Pneumothorax in presence of bronchial tuberculosis, 35
Ray, K. S., Sen, N. N., and Talukdar, N. C. Effusion in pneumothorax, 36
Reaction of lung to toxins, 9
——, tuberculoid, Dysgerminoma with, 17
Rectal tuberculosis in monkeys, 52
Reed, H. R. See Katz, S., *et al.*, 52
Reflex atelectasis, 3
Reginster, A. Blood iron in tuberculosis, 48
Respiration and blood pressure, 48
——, asthmatoid, Bronchoscopy and, 8
Rest, A. The roentgenogram and some chronic nontuberculous pulmonary conditions, 60
Results of thoracoplasty, 37
Retention of lipiodol, 62
Rhoads, P. S. Atypical pneumonia, 56
Rilance, A. B., and Warring, F. C., Jr. Pneumonitis complicating cardiospasm, 61
Riordan, J. T. Rectal tuberculosis in monkeys, 52
Rivas, C. I., and Morel, C. Hydatidosis, 5
Robins, A. B., and Edwards, H. R. Procedures in tuberculosis control, 22
Rochat, P. See Benzençon, C., *et al.*, 19
Roentgenogram and some chronic nontuberculous pulmonary conditions, 60
Ruegsegger, J. M. See Dingle, J. H., *et al.*, 54
Russo, J. G. Extrapleural pneumothorax, 36

Saccone, A., and Coblenz, A. Endothelioma of pleura, 16
Saphir, O. Myocarditis in bronchiectasis, 9
Sarcoidosis, 52
—— of heart, 53
Schenken, J. R., and Palik, E. E. Coccidioidomycosis, 1
Schmidt, H. W., and Hinshaw, H. C. Bronchiectasis, 60
Seeds, A. E., and Mazer, M. I. Atypical pneumonia, 54
Seideman, R. M. Epidemiology of tuberculosis, 19
Sekar, C. C. See Sen, P. K., *et al.*, 35
Sen, N. N. See Ray, K. S., *et al.*, 36
Sen, P. K., Sekar, C. C., and De, K. N. Effusion in pneumothorax, 35
Shackelford, R. T., and Whitehall, R. Ligation of vein for thrombophlebitis, 11
Shadows, paramediastinal, Triangular, 7
Sheldon, F. B. Retention of lipiodol, 62
Shields, D. O., and Rafferty, T. N. Pneumothorax in presence of bronchial tuberculosis, 35
Siffert, R. S., and Krautman, B. Cold haemagglutination in tuberculosis, 41
Silicosis, 5
Smith, E. B. Pleural adhesions, 8
Socio-economic aspects of tuberculosis, 22
Sound, Physics of, 46
Spleen, Tuberculosis of, 49, 50
Sprunt, D. H., and Camalier, W., Jr. Reaction of lung to toxins, 9
Stansfeld, J. M., and Stuart-Harris, C. H. Influenza B, 54
Stearns, W. H., and Long, E. R. Induction examination, 25
Stemmerman, M. G., and Auerbach, O. Congenital heart disease and tuberculosis, 30
Stenhagen, E. Phthiocerol, 44
Stereoscopic photoroentgenology, 28
Stevens, Mary E. T. See Boyd, E. M., *et al.*, 45
Stewart, H. C., Gass, R. S., Puffer, Ruth R., and Williams, W. C. Tuberculosis in households in Williamstown County, Tennessee, 19
Stout, A. P. Bronchial adenoma, 14
Stuart-Harris, C. H., and Stansfeld, J. M. Influenza B, 54
Students, college, freshman, Tuberculosis among, 27
——, ——, Tuberculosis among, 27
Survival of tubercle bacilli in glycerol, 43

Talukdar, N. C. See Ray, K. S., *et al.*, 36
Technique of first-stage thoracoplasty, 37
Tennessee, Williamstown County, Tuberculosis in households in, 19
Tension cavities, 39
Thoracoplasty, first-stage, Technique of, 37
——, Results of, 37
—— with contralateral pneumothorax, 38
Thoracoscopy, Harmlessness of, 36
Thrombophlebitis, Ligation of vein for, 11
Torres, F. E., Myers, J. A., and Harrington, F. E. Tuberculosis among children, 23
Toxins, Reaction of lung to, 9
Tracheal mucosa, Function of, 45
Treatment of actinomycosis, 1
Triangular paramediastinal shadows, 7
Troy, E. P., and Davison, R. Tuberculosis control in Chicago, 21

Tubercle bacilli, bovine, Growth of, with pyruvate, 43
—— ——, Survival of, in glycerol, 43
—— bacillus, Polysaccharide from, 43
——, Ghon's, 28
Tuberculoid reaction, Dysgerminoma with, 17
Tuberculosis among children, 23
—— —— college students, 27
—— —— freshman college students, 27
—— and pregnancy, 30
——, Basal, 30
——, Blood iron in, 48
——, Bovine, 43
——, bronchial, Bronchiectasis caused by, 33
——, ——, Pneumothorax in presence of, 35
——, Cold haemagglutination in, 41
——, Congenital heart disease and, 30
—— control in Chicago, 21
—— ——, Procedures in, 22
——, Disqualifying, 25
—— endemic, 20
——, Epidemiology of, 19
——, Genito-urinary, 51
—— in Army, 26
—— —— households in Williamstown County, Tennessee, 19
—— —— veterans, 26
——, Intestinal, 51
——, Laboratory diagnosis of, 42
——, miliary, Generalized, 31
—— of lymphatic system, 49
—— —— oral mucosa, 50
—— —— spleen, 49, 50
——, Primary, 29
——, Prophylaxis of, 21
——, pulmonary, Cancer and, 16
——, ——, Early diagnosis of, 28
——, ——, in paretics, 33
——, Rectal, in monkeys, 52
——, Socio-economic aspects of, 22
Tularaemia, Pleuropulmonary, 59
Tumor, Alveolar cell, 14
Uehlinger, E. Tuberculosis endemic, 20
Urech, E. See Benzençon, C., *et al.*, 19

Valledor, T., Martel, E., Fuste, R., and Baltrons, A. F. Cystic disease in children, 6
Vein, Ligation of, for thrombophlebitis, 11
Veterans, Tuberculosis in, 26
Village, Epidemiology in a, 19
Vineberg, A. M., and Kunstler, W. E. Tension cavities, 39
Vital capacity under water, 46

Warfield, C. H. Disqualifying tuberculosis, 25
Warren, S. Radiation pneumonitis, 12
Warring, F. C., Jr., and Rilance, A. B. Pneumonitis complicating cardiospasm, 61
Wassersug, J. D., and Pillsbury, N. H. Pulmonary actinomycosis, 60
Water, Vital capacity under, 46
Weber, H. H. Fluoroscopy and X-ray damage, 23
——, ——. ——. Fluoroscopy in Army, 24
Weil's disease, Pulmonary lesion in, 4
Wells, H. G., and Dunlap, C. E. Ossification in lungs, 10
Whitehall, R., and Shackelford, R. T. Ligation of vein for thrombophlebitis, 11
Williams, W. C. See Stewart, H. C., *et al.*, 19
Wissler, H. Tuberculosis of oral mucosa, 50
Wood, W. B., Jr. See Dingle, J. H., *et al.*, 54
Woodbury, P. A. See Hamilton, W. F., *et al.*, 47
Wright, M., and Perrone, H. Atypical pneumonia, 57
Wylie-Smith, R., and Morgan, T. N. Lobar pneumonia, 53

X-ray damage, Fluoroscopy and, 23

Zacks, D., and Hyde, R. W. Socio-economic aspects of tuberculosis, 22

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